



ODM 200 – STC

INDUSTRIAL VERTICAL STATIC BALANCING MACHINE FOR TRUCK & BUS TIRES

TECHNICAL FEATURES

ODM 200 - STC



ODM 200 – STC

INTRODUCTION

ODM 200 – STC is an automatic balancing machine for static imbalance measurement of solid metal-cord truck tires with bead seat diameter 20” to 25”. The machine will be equipped with marking device for static unbalance position, and in/out conveyors.



*Sample Picture **

** Above pictures are sample pictures, and can be different from the machine offered according to necessary accessories.*



ODM 200 – STC

BASIC PROCESS STEPS (Basic steps in automatic mode)

- The tire type is selected from the software (the tire information will be entered to the software and saved),
- The tire moves on the conveyor to the centering device,
- The lifting conveyor moves downwards, the tire will be centered automatically with the self centering chucks,
- The tire reaches to measuring speed, the static unbalance value is measured,
- The unbalance position on the tire is marked automatically by the marking device, the colour of the marker will be depending on the unbalance grade.
- The tire is unclamped,
- The lifting conveyor moves upwards,
- The tire moves to exit conveyor.

BALANCING MACHINE

This machine is designed for tires from 20” to 25”

- **Loading of Tires** : With the help of conveyors.
- **Mounting** : Automatic, pneumatic
- **Measuring** : Automatic
- **Index Locating** : Automatic
- **Marking** : Automatic

This machine is designed for serial manufacturing. Motor power is controlled by servo system. The control unit is equipped with an industrial computer. Mounting and measuring of unbalance is performed automatically by the machine. The unbalance value is read on the Polar Graphical screen, the unbalance position is automatically marked by the marking device.



ODM 200 – STC

TECHNICAL FEATURES (TIRE)

- Tire Bead Seat Diameter : From 20” to 25”
- Tire Outer Diameter : Max. 1450 mm.
- Tire Width : Max. 700 mm.
- Tire Weight : Maximum 200 kg.

TECHNICAL REQUIREMENTS

S No.	Item description	Required	Real (is filled out by the Contestant)
1	Machine for automatic checking static imbalance		
1.1	Cycle time	180sec±10%	< 150 sec.
1.2	Range of static force	10-1000H	OK
1.3	Accuracy of marking	up to 1°-5° at the imbalance 600 gcm/plain surface	1°-3°
1.4	Tire outer diameter	1200-1350 mm	OK
1.5	Diameter at rim seat	20"-25"	OK
1.6	Tire width	400-550 mm	OK
1.7	Max. weight , up to	180 kg	200 kg
1.8	Error measurement *	± 0,05%	OK

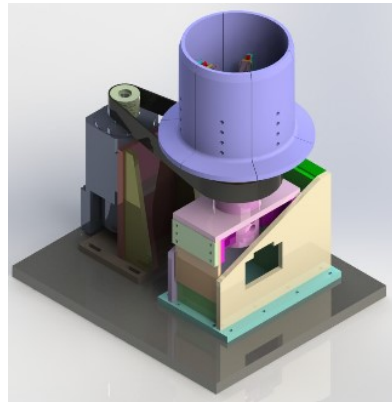
* - measurement accuracy of imbalance - ± 0,05% from the tire weight



ODM 200 – STC

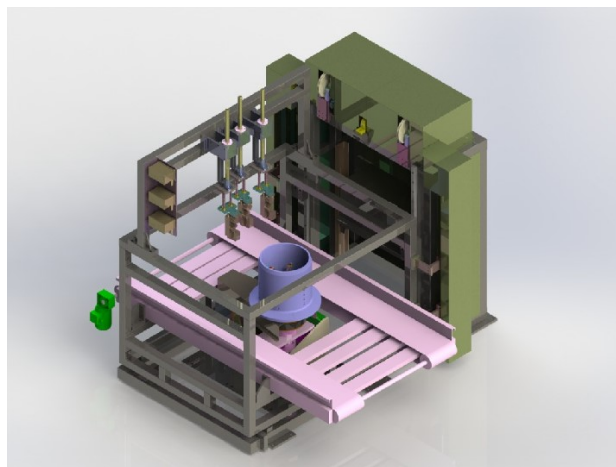
MECHANIC UNIT

The mechanic unit is consist of the servo motor, piezzo transducer, 6 centering chucks, pneumatic cylinder for the movement of the centering device.



AUTOMATIC LOADING & CLAMPING UNIT

The clamping unit is working pneumatically and consists of six identical sectors. The centering device is designed for truck tires for the range of 20” to 25”. This unit is working automatically. The tires are carried to the centering unit with the help of lifting conveyor. The lifting conveyor automatically stops with the help of a photocell, and the lifting conveyor moves downwards, on the centering unit, when the tire is centered, the clamping unit clamps the tire.

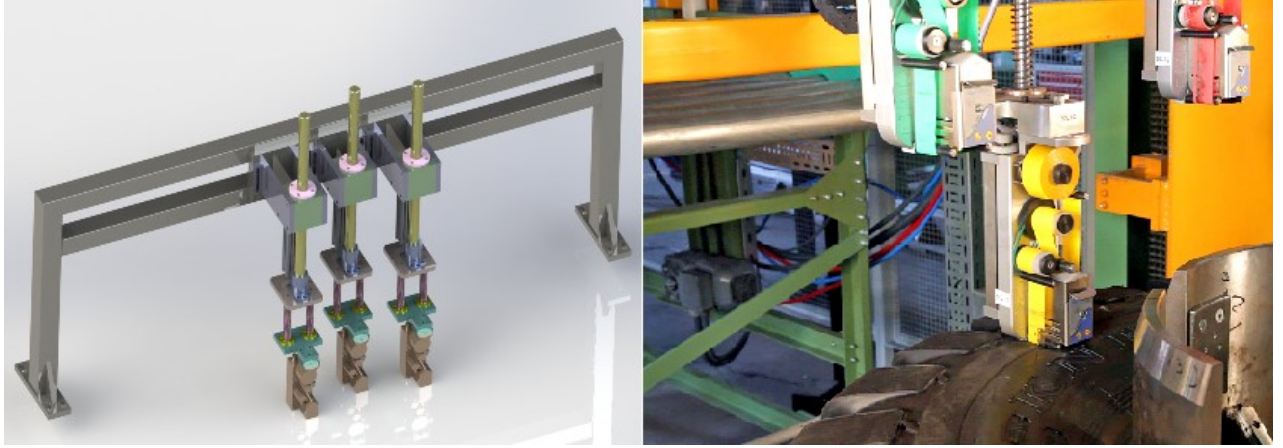




ODM 200 – STC

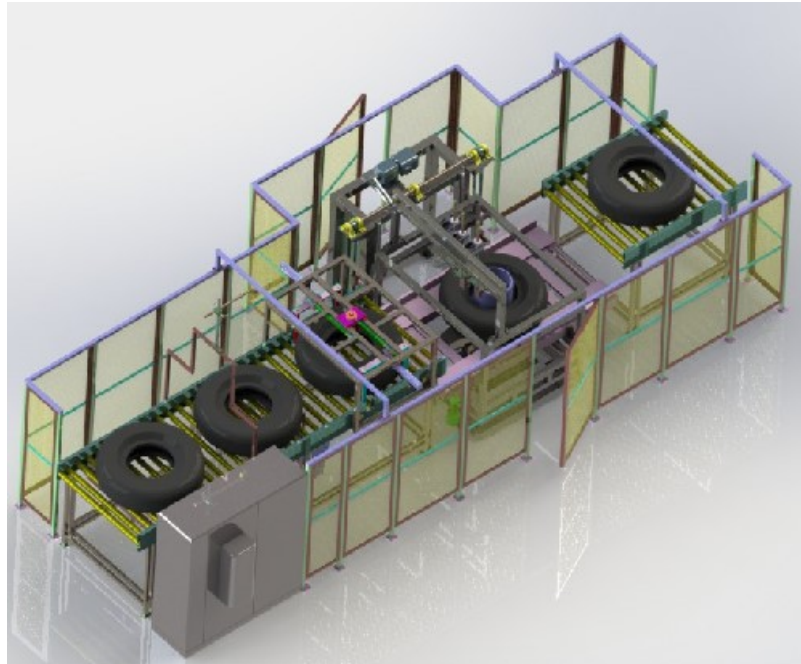
TIRE MARKING SYSTEM

ODM 200 – STC is equipped with 3 units. hot foil marking system, for marking of 3 different quality levels according to measured static unbalance level. The colors of the marking units are; **red**, **yellow** and **green**. The hot foil markers are mounted on pneumatic moving arms, and the marking operation is automatic.



PROTECTION CAGE

The protection cage is designed according to CE standards. The cage has safety switch controls on the doors of the cage, so, the machine does not start if the cage is not closed properly. During automatic working of the balancing machine, all the doors are locked automatically for security.





ODM 200 – STC

CALIBRATION

Calibration is user friendly and performed by special calibration ring. This calibration ring with the certified calibration weights will be delivered together with the machine.

CONTROL PANEL

The control panel is user friendly. All the controls like Automatic mode / Manual mode switches, “START” button, “Emergency Button” “lock/unlock” switch of the safety cage, the control of the balancing machine software and the balancing results are displayed. The control unit is equipped with 19” LCD monitor, keyboard&mouse.

